

## CONTRIBUTION TO NEUROLOGICAL THERAPEUTICS.

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THE recently-published work on Pharmacology, by Lauder Brunton, foreshadows the comparative therapeutics of the coming era, when it will be realized that only through careful observation of the effects of material medica articles upon all living organisms will we be enabled to discover true rationale. But as an illustration of the utter impossibility of any one, however talented, being able to compass satisfactorily a single branch of medicine, to say nothing of all branches, the book referred to is conspicuous. Such important articles as conium maculatum and secale cornutum are not accorded, by the author of the work, as much consideration as Harley or Trousseau gave them, when to-day in the *armamentaria* of those who treat mental and nervous diseases there are no more reliable and important drugs.

The most ignorant of the laity know of the abortifacient properties of ergot, or fancy they do; while to the accoucheur it is the *vade mecum*. Surgeons and gynæcologists find it valuable in the discussion of tumors and combined with KI.\* The general practitioner has come to use it to lessen aneurismal swellings. I incline to regard digitalis as more serviceable in aortic aneurism. Hammond ("Nervous Diseases," p. 67) credits Dr. Charles Aldrich (West Riding Lunatic Asylum Reports, vol. i., p. 71, London, 1871) with first noticing "contraction of the arteries of the retina and loss of the capillary tint of the disc" after its use; but

I think Brown-Séguard first suggested that the intracranial blood might be lessened through its action upon the muscular tissues of the cerebral vessels. At least, Dr. J. Crichton Brown (*Practitioner*, June, 1871) accords Brown-Séguard priority, and used it successfully in lessening the excitement of maniacs.

Hammond advised its applicability in active cerebral congestion; but I believe that Spitzka originally conceived the idea of equalizing the circulation of epileptics by its use, and thus aborting the arterial spasm upon which the disease apparently depended.

In my hospital and private practice I have had good opportunities to test the efficacy of special drugs, and since introducing full use of *secale cornutum*, the internes find diminished use for opium.

More than twenty epileptics at my clinics were benefited by ergot, in combination with natrium bromide. Half these cases I have every reason to regard as permanently made better—if not cured. Every one was treated as individual peculiarities seemed to require, and routine dosing was found to be hurtful. In one case of cerebral gumma, and another with a cardiac lesion, ergot intensified the fits, whereupon it was displaced by specific treatment and digitalis, with good results.

Lessening of the vertigo and psychical aberrations followed its administration in one case of cerebellar tumor, proven to have been such *post mortem*.

Three cases of exophthalmic goitre began to amend with the first drachm of the fluid extract. One female, æt. forty, had been treated for rheumatism and anæmia, the pains and facial pallor misleading the prescribers. The color returned to the face and the intrascapular suffering ceased as the tumor of the neck disappeared under the constringing influence of the medicine.

It is conceivable that want of blood in the face and head may often depend upon dilatation of vessels in other parts of the body, and thus mere symptom-treatment would be absurd. Where such paleness was due to an aneurism, physiologically, the etiolation should have little consideration.

Instead of chloral I use secale with Na Br in delirium tremens, and the sequelæ of alcoholic debauches. The insomnia, tremors, and restlessness are rapidly relieved by this combination, where the chloral temporarily stupefies. In aggravated cases conium maculatum and hyoscyamus are added with prompt results.

I succeeded in restoring the reason and use of his limbs to a post-hemiplegic insane inventor by continued use of ergot with KI. The inception and persistence of the trouble were clearly due to an engorged brain, which, outside of the hospital had rapidly grown worse under large morphine doses given by a homœopath.

Ergot quells the excited stage of katatonia, and may be given during the stuporous period for the purpose of anticipating the succeeding mania. Indeed there is reason to think that all alternating phases of this psychosis are abbreviated by its use.

The full value of ergot is by no means appreciated by the profession, yet, as is the case with every other drug, it is capable of doing injury.

In hysteria, with or without digitalis, I have seldom found it amiss. According to my theory (set forth in "Comparative Physiology and Psychology," 1885), in this condition there is a disparity between the cerebral blood supply to centres and the cerebro-spinal nervous stimulation, so that when excitation occurs, over a cerebral or spinal tract, the necessary customary vaso-motor synchronous action does not take place, or it drives the blood to a contiguous or other point, distant from the centre that healthily should receive the nutrition. Ergot tends to hold the calibre of the arterial system in tone and to overcome such aberrations. Digitalis aids this tonus, through its special cardiac effect, and partially also antagonizes hysteria by the nausea it induces, when taken in pretty full doses.

A case of recurrent congestive headaches in my own family led me to notice the full value of ergot when judiciously given. When these cerebral torments were of the active or arterial type the relief afforded by a teaspoonful dose of the fluid extract was noticeable, particularly in the inception, in

the stage that could be, for the nonce, relieved by pressure upon the carotids. But when the venous engorgement was the main cause of the head-fulness, Paullinia sorbilis or a little wine, answered better, unless the condition were extreme, when catharsis was the only means of relief.

Even in the active hyperæmias, when *secale* had closed the avenues toward engorging the brain, I saw that pressure was simply transferred from the arterial distribution to the ventricles, and that derivation to the bowels must be conjoined with attempts to meet requirements, by consideration of the primary source of the ailment, affording one of the innumerable evidences that the physician must *think*, and must have a physiological basis for thought, to be able to cope with disease in its multiformity.

A well-marked case of spinal meningitis was brought into the Alexian Hospital, and under my direction was treated with large *secale* doses by Dr. Hoelscher, the interne. The immediate relief afforded and the rapid institution of convalescence, led both the interne and myself to anxiously review the history, progress, and recovery of the case, as there was no literature to justify such treatment alone. The remissions turned out to be so protracted and the recovery so decided as to leave us no doubt of the value of the medicine in its practical workings. I was induced to use it from purely theoretical considerations easily arrived at by neurologists.

Discussing the subject with a medical general practitioner, Dr. Lydton, he tells me that he has had good results in the use of *secale* in the hyperæmic stage of pneumonia. Theory led me to use it in the trivial annoyance occasioned by parotitis in two children, with favorable apparent reduction of the swelling, and Dr. Hoelscher informs me that he has used it in epididymitis and phlebitis with satisfaction. He is somewhat enthusiastic, not unjustifiably so, in its use since I introduced it to his notice, and together recently we witnessed the decided relief it afforded a cerebral erysipelas case in clearing up his mind and diminishing the painful facial turgescence.

I can see why in a case of terrible *delirium grave secale*

availed nothing, when the brain I took out after her death was œdematous in the extreme. Acute drastics might have been better, though I expect only temporarily so.

Dr. Seguin's interesting addition (in the January number of this JOURNAL) to our knowledge of optic-disease association with the gyrus cuneus, so satisfactorily elaborated by Exner, is timely. There are other optic disturbances connected with injury to this region, which I resist the temptation to speculate upon in what is intended to be a purely clinical, therapeutic article, and shall here merely mention that a gentleman sustained a contused hurt to his skull thirty years ago, above and over the torcular herophili, and subsequent to business anxieties was treated for delirium tremens unjustifiably. Falling into my hands, I lessened the circumscribed hyperæmia, toned up his general system, endeavored to soothe cerebral excitement with hyoscyamus, and withheld chloral or any thing else which afforded merely temporary relief and that did not ensure equable blood distribution. Needless to say I used secale, and, after a six months' bout with optic hallucinations, during which he avers he "did not sleep a wink," to-day he is attending to his business nearly as well as a year ago.

I have not lost consideration of my old preceptor's disquisitions against the undue effects of this medicine, by any means, but have found occasion to modify my ideas derived from him and "the books" considerably. The gangrene is only likely to occur in senile cases and where used by "tradesmen doctors" unphysiologically. Hammond is right in stating that dosage is too guarded—that we do not use enough. I have found that three drachms daily of the fluid extract was effective in a case of cervico-brachial neuralgia, due to effusion in the course of the brachial distribution, with a precedent rheumatic etiology, where previously ten-minim doses had been unserviceable.

*A priori* we might expect interference with the catamenia by its prolonged use. I have been puzzled to note that no such thing has taken place. On the other hand, in four female cases of epilepsy there was an increase in the menstrual discharge, and, *mirabile dictu*, epistaxis accom-

panied one month's experience. I ascribed this access to the bromide, which was given at the same time, but am by no means satisfied that this was the cause of the hemorrhages.

Drachm doses of the fluid extract have, in my practice, repeatedly *completely* relieved the dull cephalalgia of typhoid fever, and stopped the nose-bleeding that depended upon the same condition.

As an evidence that the use of *secale cornutum* is not, in epilepsy, a transatlantic innovation, I will state that I was called in consultation by a German physician in this city to attend his brother-in-law, who had suffered a year or two from epileptic paroxysms. The doctor saw at once the physiological reasons for the use of the arterial equalizer, and stated that he had just come from Erb's clinics in Germany, and the only thing mentioned there was bromide of potassium for this disease.

Hammond's latest edition, Ross' and Webber's recent works also do not hint at it.

In addition to the instances wherein it was above mentioned as serviceable, I have used it effectively in hypochondria, parietic dementia, melancholia with cardiac weakness, facial flushings, associated with menstrual irregularity, hemicrania, opium habituation, and insomnia from cerebral hyperæmia.

It is seldom of use in coarse brain disease, or in cerebral syphilis. I have reason to think one case of transitory frenzy was caused by it, and at the Home of the Incurables in this city a female is said to be suffering from multiple cerebro-spinal sclerosis, through excessive use of ergot during an attempt to dissipate a uterine tumor. Cases of locomotor ataxia are reported from its undue use. Where it has been found serviceable in ataxia I incline to doubt the diagnosis, as aneurisms may induce conditions simulating *tabes dorsalis*.

Neither in chronic nor acute chorea has it proven useful in my experience, and once I noticed a tendency toward alopecia in a patient using it, which ceased on discontinuance of the drug.

In these cases, when giving diuretics, such as acetate of potassium, spts. æth. nitr., and ergot, at the same time, strangury occurred, from which I inferred that when the kidneys required controlling, this combination, guardedly used, might prove to be of value.

Squibb's fluid extract is the only reliable preparation, in my opinion. The solid extracts, including Bonjean's ergotine, I am perfectly satisfied are not to be depended upon.

The active principles of ergot are essentially amides or amines, both of which pass to volatile compounds, which the presence of alcohol in the fluid extract would restrain. Hence solids are apt to decompose. The latter have a nitrogenous odor resembling beef extract, which indicates an unfavorable change in the drug.

The newly introduced antipyrine has been largely used at both the Alexian and Michael Reese hospitals in this city, in typhoid-fever cases, and occasionally with good results in traumatic and phthisical elevations of temperature. A Polelander suffering from pulmonary consumption at the Alexian was brought in with well-marked phthisical insanity, destructive and suspicious. Pulse rapid and weak. Noticing the temperature to be  $103^{\circ}$ , I advised Dr. Hoelscher to use about seven grains of antipyrine, and observe the influence it had upon the mental condition as well as heat reduction. In an hour the insanity ended, after a duration of two weeks, and after two weeks' further sojourn in hospital, the case was discharged cured as to the psychosis, and improved slightly with reference to the lung trouble.

The case of recurrent cerebral congestion, referred to in this paper, wherein ergot had been tried, was complicated with an excessively irritable stomach, causing the frequent rejection of the fluid extract, and, as before stated, the solid extracts did no good. In conversing with my friend, Dr. Thilo Brauns, I asked him if he regarded the cotton-root bark he used in his gynæcological practice as equalling secale as a constringent of the uterus. He replied that he had come to rely upon it as better than the ergot. As the physiological action of the two drugs must be the same, and the gossypium does not nauseate, I concluded to try it in



all cases where previously I had used the ergot, with the following results: *Gossypii radidis cortex* acts more energetically than ergot in reducing the calibre of arterioles. Its action is swifter—the effects being manifest in two to three minutes. The pulse-rate dropped in that time from 112 to 78, in a case of cerebral hyperæmia in which it was used by me.

Up to the present writing I have prescribed gossypium twenty-two times in

- 3 cases active hyperæmia,
- 9 “ epilepsy,
- 1 case post hemiplegic insanity,
- 2 cases aneurism aorta,
- 1 case angio-paralytic hemicrania,
- 1 “ spinal congestion,
- 2 cases delirium tremens,
- 2 “ cephalalgia from debauch,
- 1 case traumatic cerebral meningitis,

with favorable results.

I find it best to use less of the gossypium than of the ergot, and, approximately, might estimate the energy of the two drugs as represented by doses of  $\frac{2}{3}$  or  $\frac{3}{4}$  the former to one of the latter.

I noticed also that the contraction induced by the gossypium was more enduring, and, in the active recurrent cerebral hyperæmia case alluded to, the effects of a few doses prevented attacks for two weeks, which, theretofore, had occurred nearly every other day. But I was compelled to desist from its further use, when—in lieu of the frenzied headaches—cardiac and gastric spasms succeeded, due, in my opinion, to either effusion or thrombi (compression symptoms) in the pneumogastric centres. These dangerous paroxysms disappeared after a hemorrhoidal hemorrhage, to be followed in a few days by a return of the headaches, while the gossypium and all other remedies were refused, as even food could not be tolerated. Atropine and morphine hypodermatics were then resorted to instead, affording some relief, but this was a final resource, for organic disease of the brain has advanced to such a stage as to render all but palliative methods useless.